THE

MEDICAL AND SURGICAL REPORTER.

No. 406.] PHILADELPHIA, OCTOBER 8, 1864. [Vol. XII.—No. 9.

Original Department.

Communications.

BIOGRAPHICAL SKETCHES

OF

Distinguished Living New York Surgeons.

By Sam'l. W. Francis, M. D.,

Fellow of the New York Academy of Medicine.

No. 4.

Lewis A. Sayre.

Dr. Lewis A. Sayre was born in Madison, in the State of New Jersey, on the 29th of February, 1820. His father, Archibald Sayre, led the life of a farmer, and was respected by all who appreciate the higher instincts of veracity, honesty and the amenities of a rural gentleman. Deacon Ephraim Sayre, of Presbyterian indoctrinations, Lewis' grandfather, was possessed of great piety and truly evangelical sentiments. As Quartermaster under General Washington, he evinced those sterling qualities that must forever command the esteem of friendship and exalt the name of patriot.

Under the personal supervision of John T. Dertheick, at Madison, N. J., Lewis Sayre fitted for the Wantage Seminary, at Deckertown, Sussex County, N. J., where he made no little progress in the study of scientific works and their collateral branches as expounded by the learned and efficient Edward Stiles. Soon after the Transylvania University received an additional student who maintained the vigor of his mind and was graduated creditably in 1837. On going forth into the open world, though strongly advised to enter upon the duties of a clergyman's vocation, young Sayre exhibited so urgent an inclination to become a doctor that the will of interested relatives was merged into the fascination of a son's desire, and accordingly in the year 1839 he entered the office of Dr. David Green, who proved himself of lasting benefit to his pupil, by sound maxims and clear sage advice. During this time young Sayre took charge of the office patients and labored conscientiously.

The ambitious student next officially matriculated in the College of Physicians and Surgeons, then presided over by Dr. John Augustine Smith, and was graduated in 1842 M. D. Having received his imprimatur, Lewis A. Sayre went forth to meet the sick, and ere many months elapsed, arrested the attention of inquiring minds by his willingness to undertake operations apparently only adaptable to the mind of a surgical veteran.

As early as 1841 he performed the operation for strabismus, it being the third time only that any surgeon had as yet ventured upon so delicate a task in this country. Dr. Detmold was the first and J. Kearney Rodgers, M. D., the second. A few months after securing his diploma he was appointed Prosector of Surgery in the College of Physicians and Surgeons, by Dr. Willard Parker, who still retains his postion as Professor of Surgery in that institution. Having charge of the clinic, Dr. Sayre made bold to open an abscess connected with chronic disease of the knee-joint, and then, for the first time in public propounded the salutary principle (at that period a novelty), of opening by free incisions all joints where there was suppuration, with destruction of synovial membrane and erosion of the articular cartilage; treating it exactly in the same manner that an abscess is dealt with, though connected with the bone, the anatomical and physiological characteristics of the joint having been lost by the previous disease. This suggestion at first, met with many severe criticisms from those advanced in years; but at the present time is universally believed in as excellent in theory and effective in practice. Dr. Sayre claims this idea as his own, though others in the profession have announced it to belong to Dr. Cooper, of San Francisco, Cal., now deceased, who was a student at the same time that Dr. Sayre officiated at the clinic. The treatment of *cold abscess* by free incision instead of a valvular one, was also advocated by him during the same year.

Meeting with cases of a similar character, such as white swellings, strumous joints, etc., Dr. Sayre arrived at the conclusion that they were not necessarily constitutional, especially because local treatment, free incisions and the like had produced so marked an improvement in almost every case. Therefore he made bold to propose a

radical operation in the case of a child of Mrs. Keep, as early as 1843. This, however, was not permitted by the relatives, for prejudice against anything new in the way of experimental surgery, and particularly a free use of the knife in that apparently unexplored region, presented obstacles that could not be overcome. Accordingly the child wasted away and died. On making a post-mortem examination, no tubercles being discovered in the lungs or any other organ, Dr. Sayre felt still more convinced that his theory was correct, and determined in the presence of witnesses, to test the first case that opportunity placed in his path.

No occasion warranted the experiment till 1852, when Dr. Sayre exsected the head and neck of the femur and a portion of the acetabulum with perfect success. The patient, a young girl, rapidly acquired a healthy tone, and recovered. She is still living and in the enjoyment of a sound constitution though eleven years have elapsed, and, what is even more remarkable, is able to enjoy every natural and free motion while exercising this limb. About the year 1844, Dr. Sayre was appointed Hospital Surgeon of the First Division, N. Y. M., a responsible position which he still holds. In 1859 he was elected Resident Phyisician, a matter of no little importance to the welfare of the city. In 1853 he became Visiting Surgeon of Bellevue Hospital and has been enabled not only to witness its rapid improvement in hygienic laws, but also to advocate with abundant zeal the salutary steps adopted by those in authority.

When Bellevue Hospital College was inaugurated, Dr. Sayre was appointed Professor of "Orthopœdic Surgery," a chair created for the first time in this country. Any medical practitioner, who is not above attending the poor, is fully capable of appreciating the necessity for a clear expounder of truth in this department.

In 1849 Dr. Sayre married Miss Eliza Hall, of Harlem, N. Y., daughter of C. H. Hall, a gentleman of high social attainments and decision of character. The genial influences of domestic felicity are eminently inherent in this united family.

Among the writings of Dr. Sayre the following may be of interest to the community at large:

Exsection of the Head of the Femur and Removal of the Upper Rim of the Acetabulum for Morbus Coxarius, 1854.

Report on Morbus Coxarius, or Hip Disease, containing many important statistics, 1860.

Remarkable case of Deception: A woman professing to secrete nothing but charcoal and stones for a number of years, all the natural functions being arrested, and the deception unmasked, 1863.

Morbus Coxarius, Art. I. Clinical Lecture. Art. II. Objections to its Treatment in the Advanced Stages by Extension, unless preceded by Tenotomy. Illustrated by cases, 1863.

A new Operation for Artificial Hip-joint in Bony Anchylosis. Illustrated by two cases, 1863.

Dr. Sayre has made great improvements in the mechanical construction of instruments for the alleviation of patients afflicted with this disease.

As a lecturer Dr. Sayre interests while he instructs. He is not a man to keep an audience by vacuity. He must have facts, and when he has them they are unfolded in a pointed manner. A loud, clear, deep voice is of no little assistance in the auditorium, and when practical demonstrations are combined with ethical teachings, a favorable impression must necessarily be the result. You not only hear what is uttered, but comprehend thoroughly the pros and cons of such and such a case. Most certainly if any young physician goes forth, in this present living age, after having attended a full course of clinical lectures, without being qualified in many respects to practice, the fault is not attributable to the professor. It is the want of a susceptible mind and retentive memory.

NEPHRITIS,

Proceeding to Suppuration without any symptoms to indicate the Nature of the Disease.

By John E. McGirr, M.D. LL.D.,

Of Latrobe, Pa.,

Late Professor of Anatomy, etc., and one of the Surgeons to the Illinois General and Mercy Hospitals, Chicago, Ill.

On the 30th of June last, J. K., æt. nearly 93 years, sent for me to relieve him of a suppression of urine which had lasted for two days, and which had been neglected in the hope of relief from domestic remedies. I introduced the catheter but no water flowed. On withdrawing the instrument, clots of blood filled the holes. Turning it upside down bloody fluid flowed from it. The instrument was introduced several times with a similar result. Finding that the bladder was distended with blood instead of urine, my endeavor was to devise some means by which to break up or dissolve the coagula.

I forced a strong alkaline solution into the bladder, by means of a syringe constructed with a valve to prevent regurgitation, and administered nitrate of potash internally, whether from the effect of the alkali, or from the mechanical effect of the injections, or from both, I had the

satisfaction of getting rid of the blood by the third day, when I obtained one and a half pints of urine, still somewhat bloody, of specific gravity, 1025. Oil of Turpentine was administered, and in a few days more, the water flowed clear and of about the natural color and consistency with specific gravity 1013. The urine contained no sediment and was alkaline and offensive.

On only two occasions afterwards was there any sign of blood in the urine. Once during the second week of the patient's illness, the urine drawn in the morning was bloody, and once, during the third week, a small quantity of blood was contained in the morning's drawing. The urine was drawn twice each day. Patches of ecchymosis extended down the inside of the right leg, and about both knees, and also, upon the back of the left arm near the wrist.

Notwithstanding the removal of the blood and the natural appearance of the urine, the bladder did not recover its tone; and, on the morning of the seventh day the urine drawn, one and a half pints, contained three fluid ounces and one fluid drachm of pus which, on standing, settled rapidly to the bottom of the vessel. The urine was strongly alkaline and exceedingly offensive.

That the sediment was pus, was determined by the usual chemical tests, and by the microscope. From the date of this first appearance of pus, the urine was never entirely free from it while the catheter was used. More or less would be found in the urine last drawn, but never as large a quantity as that first drawn. Sulphuretted hydrogen seemed always present in the bladder, for the silver catheter was invariably stained with it.

In the beginning of the second week of the patient's illness, the right leg became anasarcous and very much enlarged. Cream of tartar and jalap powders, and steaming with an infusion of bitter herbs, relieved this to a great degree.

During the two weeks before the patient's death, the urine was discharged without the use of the catheter, dribbling constantly, the bladder being unable to retain it for any length of time. At this period the introduction of the catheter was attended with pain. The urethra was tender and also the prostate gland, which had been very much enlarged from the commencement of the attack, offering considerable obstruction to the use of the instrument at every introduction. The bladder also became very tender, and pressure upon the abdomen over it caused pain.

This was the first pain this patient had suffered, and, at no time, had he any pain in the region of the kidneys; nor had he any rigor, nor chill, nor fever. There was not a single symptom to point to the nature of the disease anterior to the appearance of the pus in the urine, nor was there one that was not consistent with his usual health if we except his debility. He died at three o'clock A. M., August 21st.

Post-mortem. The section made nine hours after death, revealed extensive disease of both kidneys, and also disease of the bladder. Of the right kidney nothing was left except its outward envelope, the whole glandular structure was destroyed. It might be called the sac of one large abscess, and contained about a tablespoonfull of the same greenish-white, thick, offensive matter, which had constituted the sediment of the urine. The ureter was distended to twice its natural size. The vessels of the pelvis seemed healthy; there was no blood within them.

The left kidney was of a deeper color than naturally. In its centre there was an abscess of about one and a quarter inches in length, half an inch in depth, and from three-quarters to one inch in width, opening into the ureter. This was empty except that a very small portion of matter adhered to its surface. At the lower end of the kidney there were three small abscesses somewhat larger than peas, and at the upper end there were two of about the same size as those of the lower end. These were filled with a thick yellowish creamy substance, and had as yet no outlet. The remaining portion of the kidney was as firm and as healthy as natural. The ureter was enlarged.

The bladder was much thickened and indurated. Its mucous lining was almost entirely destroyed; only small patches with thickened everted edges remaining. Its internal surface was covered with strings of coagulated blood. About a teaspoonful of pus was found in its neck. The clots being removed the internal surface presented the appearance of muscular fibre deprived of its connecting cellular substance, presenting longitudinal elevations and depressions, more nearly resembling oak graining than anything else to which I could compare it. The remaining contents of the abdominal cavity were healthy.

Remarks. What is remarkable about this case is, that the nephritis existed, proceeded to suppuration and discharged the contents of the abscesses into the bladder without there having, at any time, existed a symptom to point to the nature of the affection. It confirms a dictum of Dr. Watson's, to be found in his lecture on

nephritis, but uttered, evidently with some doubt on his mind, or at least of his ability to prove the assertion. Speaking of suppuration, he says, "such suppuration is marked sometimes by the supervention of rigors, by throbbing, perhaps, and it may be, by a remission of pain; but I believe it may take place without throwing out any such signals. Nay, I think it probable that inflammation confined to the parenchymatous substance of the kidneys, may arise and run through all its stages without denoting its presence or progress by any noticeable local signs; and that the sharp and peculiar symptoms ascribed by authors to acute nephritis, manifest themselves only when the investing membrane of the gland, or its pelvis and excretory tubes are involved in the inflammatory process. However this may be," &c. *Watson's Lectures Edition* 1858, p. 985.

Editorial Department.

Periscope.

Water as a Sanitary Agent.

It is stated by the *Sanitary Reporter*, that General Morin who has much occupied himself with improvements in the ventilation of public buildings, in a note addressed to the Academy of Sciences, in Paris, treats of what he terms the "hygrometricity" of confined places. Much struck with the importance which the English engineers and authors attach to the imparting to the air employed for ventilation, whether heated or not, a certain amount of moisture, he was induced to investigate whether the salubrity of such air might not be due in some measure to the development of a certain amount of electricity by the passage of the air through the vaporized water (as in the case with regard to dew and rain during storms), giving rise to the production of free oxygen. If this or some analogous modification can be shown to take place, we have in our hands a simple, efficacious and economical means of purifying the air of inhabited places, especially in summer. Air containing free oxygen, possesses in a high degree the property of burning certain miasmata and emanations from bodies in a state of putrefaction. General Morin accordingly instituted some experiments, in order to ascertain whether the dispersion or solution of a certain quantity of sprayed water in the air sensibly modified its electrical condition. The results show the extrication of free oxygen, and the subsequent or concurrent formation of an acid. As both the oxygen and the acid, probably a nitrous compound, possess the property of destroying putrefactive emanations, their presence sufficiently proves that the vaporization of water in the air besides the increase of moisture and depression of temperature which it gives rise to, may exert an action on the animal economy, and upon the air of habitations, deserving the attention of sanitarians.

Malignant Fibro-Cellular Tumor.

Braithwaite's Retrospect contains the following abstract from the *Glasgow Med. Jour.* by A. B. Buchanan in reference to the modern classification of tumors. He says they are divided into two varieties—one into *innocent*, and *malignant*, which is best adapted for the practical physician; the other into homologous and heterologous which is best adapted for the pathologist, and is on the whole more concise and scientific.

A *homologous tumor* is one the cells of which are identical with, or only slightly differ from those normally present in the tissue in which the tumor occurs; as in the familiar case of a fatty tumor developed in the areolar tissue.

A *heterologous tumor* is one the cells of which are quite different from those of the tissue producing them; as when epithelial cells are developed in an internal organ and without connection with any epithelium. At the same time the division into innocent and malignant possesses obvious advantages; and fortunately both may be retained without causing much confusion. In fact as a rule, a homologous tumor is innocent in its character, and a heterologous, malignant. It is only necessary to bear in mind that there are some exceptions: because the *heterologous nature* of a tumor is *only one of the characteristics of malignancy.*

In a malignant tumor or cancer, using the term in its widest sense: First, the cells do not generally resemble in form those of the tissue in which they occur; Second, they do not generally resemble one another, as pathologists say, they are *indifferent;* Third, whether these characters apply or not, they tend to propagate themselves indefinitely, and in great measure independently of the surrounding tissues, which they infiltrate without discrimination; and, Fourth, in a malignant growth there is a tendency to local fatty degeneration of the newly-formed tissue, which on a free surface produces ulceration. Hence there are certain homologous tumors which are malignant or cancerous; and fibrous and fibro-cellular as well as glandular tumors, although not heterologous like a true carcinoma, may be divided into the innocent and malignant.

In our case the tumor is homologous in form, where it has attacked the muscular tissue, but still it is essentially homologous. It is an unlimited growth. according to the theory we have as most probable, of cellular elements belonging to the areolar connective tissue, unaccompanied by a proportional increase of the intercellular substance; and accordingly we have named it a *malignant cellular fibroma*, or to avoid all pedantry, a *malignant fibro-cellular tumor.*

Arsenic as a Preventive of Phthisis.

M. MONTIGNY, French Consul in China, in reference to the use of arsenic by the Northern Chinese, says they mingle it with their smoking tobacco. According to missionaries who have lived a long time there, tobacco free from arsenic is not sold. The same witnesses assured the consul that the arsenic smokers were stout fellows, with "lungs like a blacksmith's bellows, and as rosy as cherubs." The publication of M. MONTIGNY'S statement has called out a letter from Dr. LONDE, who announces that some years ago, in the course of a discussion at the Academy of Medicine, on the agents to be employed to cure tubercular consumption, he told the assembled doctors that he had found but one successful means of combatting this dreadful disease, and that means was the smoking of arsenic. The doctor reaffirms his commendation of this remedy.

A new Acid in the Kidney.

As a product of the secretion of the kidney, a new acid of a colloid character has been described by Dr. MARCET. It consists only of carbon, oxygen, and hydrogen, being poor in the last element and rich in the first. Its quantitative analysis has not been made; but it is thought that it originates in the transformation of one of the non-nitrogenous constituents of the liver known as glycogenic substances.

An Extraordinary Case of recovery from severe Gunshot Wounds.

At a meeting of the Ulster County (N. Y.) Historical Society, held in the village of Ellenville on the 8th of July, Rev. E. W. BENTLEY, the Secretary, reported the following remarkable case, which seems to be well authenticated, and is of sufficient interest to transfer to our columns. We copy it from the proceedings of the Society published in an Ellenville paper.

Serg't HIRAM H. TERWILLIGER, of Ellenville, N. Y., after having served a three months term in the Twentieth Regiment N. Y. S. M., in 1861, re-enlisted in September of that year on the re-organization of that regiment in Co. E. Capt. P. WARD.

He was soon after made Orderly Sergeant of the company, and in that capacity accompanied the regiment to Washington, and thence to Upton's Hill, Centreville, Manassas, and Fredericksburgh. On the removal of the regiment to Winchester, he was taken ill and sent to the Wolf Street Hospital, in Alexandria, where he remained six weeks, and then rejoined the regiment, which meantime had returned to Fredericksburgh.

During Pope's retreat he accompanied the regiment in all its marches, up to the Second Battle of Bull Run, which took place on Saturday, August 30th, 1862. On that occasion he thinks his company came under fire about 3½ P. M. He was very soon after struck by a minie ball just below the calf on the inner side of the left leg. The bullet split upon the bone, one part passing through and issuing nearly opposite its point of entrance. The other part, a flattened, ragged-edged half of the ball, lodged on the outer side of the leg, whence it was afterwards extracted by Dr. ROBERTSON, at the Fairfax Street Hospital, in Alexandria. This wound bled freely, and occasioned considerable pain; but he kept his place till, as he thinks, about a half hour later, when he was struck again by a round bullet on the left side between the eighth and ninth ribs. The ball passed directly through the cavity of the chest, grazing the lungs and liver, and making its exit between the seventh and eighth ribs on the right side. It then lodged in the right elbow, severing or wounding the spiral nerve, fracturing the lower extremity of the humerus and dislocating the joint.

The first stunning sensation of the wound having passed, he left the field, leaning on the arm of his comrade, ISAIAH DECKER, of Middleport. Emerging from the woods in which the regiment was posted, he passed near to a tree under the shade of which he recognized Captain WARD lying on the ground. The Captain called, "Sergeant can't you help me? I am wounded, and must die if I can't get help." TERWILLIGER replied, "I am wounded too, but perhaps DECKER can help you." So leaving DECKER to assist his wounded Captain, TERWILLIGER dragged himself on for a distance of two miles, as he judges, though it might have been less; when exhausted by the loss of blood, he fainted and fell. Presently reviving, he called upon two soldiers who were passing for aid. They conducted him to where a company of "drummer boys" were stationed, who placed him upon a stretcher and carried him to an ambulance a half mile further on. The next forty-four hours are almost a blank in his remembrance. He recollects now and then catching a glimpse of the fact that he was moving, but whither, he neither knew nor cared. He is, however, informed that at about 4 P. M., on Monday, September 1st, he was deposited at the Fairfax Street Hospital, in Alexandria then, as now, under the superintendence of Dr. JAMES A. ROBERTSON. He was insensible, and to all appearances dead, and as such, was laid aside for the present to make way for the more pressing claims of the living. An examination of his case had, as soon as it could be reached, disclosed symptoms of life. He has an indistinct recollection of being carried up the stairway of the building. The energetic treatment then applied completed his restoration to consciousness, and with that came a deep fixed purpose to live. And doubtless this resolution had much to do with his subsequent recovery. The rigid self-control by which he kept down all excitement of anxiety and fear, and held his courage and patience from flagging under the pressure laid upon them, conjoined with a naturally vigorous constitution, gave him and retained for him his hold on life.

Immediately upon the receipt in Ellenville, of the news of his wound, his brother, THERON, started to his assistance. But in Washington

he learned from what he deemed an authentic source, that HIRAM was mortally wounded, and that he had died and was buried on the battle-field. This information was so confirmed from other sources, that THERON was forced to believe it, and sadly turned homeward. Some two weeks later, a line from the hospital gave to his friends here the tidings of his condition. He was alive, but his case was hopeless. His father and sister went at once to Alexandria and found him weak indeed, but still resolute and hopeful. His sister remained and nursed him with a true sister's devotion, till he was able to leave. For some weeks Dr. ROBERTSON could give him no encouragement to hope for a recovery. But gradually the wounds one after another healed and his prospects brightened. At the end of the eighth week a partial relapse occurred on the sudden closing up of the chest wound. A diarrhœa set in, and some feverish excitement supervened, but all passed off in a few days. His appetite and flesh returned and he was ultimately pronounced convalescent.

He received his discharge from the hospital on the 14th of January, 1863, and started for home on the 15th. He bore the journey well and reached his father's house on the 17th, fatigued, but still hopeful, and with every prospect of a speedy restoration to his wonted health and strength.

But when the excitement of his arrival home had passed off, it was found that something was wrong. An annoying cough made its appearance, a severe pain seated itself in his left side, his sleep was disturbed, and his appetite somewhat impaired. This state of things grew gradually worse. His breathing became laborious, his feet and limbs swelled, night sweat came on, his cough grew to be incessant and was accompanied by a profuse expectoration. The physicians in the vicinity kindly looked in upon him, but seemed generally to feel that there was but little chance of his recovery. The sequel of the case will be best told in the words of Dr. J. J. WARD, of this village, who, at my request, has prepared the following statement:

"Sergeant HIRAM TERWILLIGER came under my care about the 1st of April. 1863. He had then been home about two months. The original wound was healed, but I think he had taken cold on his way home. He had been failing ever since he left the hospital. At the time above mentioned, he was suffering intense pain in his side, his cough was very harassing, his limbs were badly swollen; he had rest neither day nor night; but still his courage was undaunted.

From the large amount of matter which he expectorated, and from other symptoms I was led to believe there was a deposition of fluid within the cavity of the chest, and accordingly proposed an operation for its removal, to which he assented. Consequently on the 28th of April the operation of *Paracentesis Thoracis* was performed by Dr. SMITH ELY, of Newburgh. A trocar was plunged into the cavity of the chest just below the left shoulder blade, and an India-rubber tube inserted in the opening, the ends of which were left hanging down about four inches, the one within and the other on the outside of the chest. The operation was painful in the extreme, but weak and emaciated as he was, he endured it without the flinching of a muscle. The case was one in which no anæsthesia could be administered owing to his feeble condition. Neither indeed did he wish it. Through the syphon formed by the tube there were dischargd during the ensuing ten days about seven quarts of matter. At the end of that time the tube was removed and the opening immediately closed. The heart, which had been pushed around to the right side, resumed its natural position; his lungs resumed their proper functions; his cough ceased; the swelling disappeared from his limbs; and his health gradually improved till about the 1st of September when he removed to Alexandria, D. C., and went into business. His right arm was still paralyzed and nearly useless.

(Signed) J. J. WARD."

Reviews and Book Notices.

The Philosophy of Marriage, by Michael RYAN, M.D., Member of the Royal College of Physicians and Surgeons, in London. Lindsay & Blakiston: pp. 285.

Doubtless few members of the medical profession have failed to recognize the lamentable extent of suffering which results from the excessive weakness and ignorance of many, whose relations from marriage demand a consistent conjugal life. No member of our profession can have been much engaged in practice, without having experienced frequent instances of crime, with its consequent remorse, and perhaps physical disease, which might all be referred to the one cause of a mal-appreciation of the marriage relations. Few among us have escaped the sad interview which has disclosed the secrets of the sacred nuptial bed, and horror-struck at the fearful abyss of misery which would appear to confront the unhappy pair, we have called to our aid every possible effort to correct the error which originated the distress, and to reinstate the fallen one in the partner's affections. Frequent demands of this nature fall to the lot of every kindly disposed member of our profession, and by him whose heart as well as mind is devoted to the welfare of suffering humanity, the appeal cannot be disregarded. From whence, then, is the information to be derived which shall prove the balm of Gilead to these wounded souls? Is it from the book which we are called upon to review? Indeed to us it would appear that the object of the book, if so good an one as that we have mentioned was designed, has not in any degree been effected.

Looking at its moral, social, or medical relations, the conclusion to which we are inevitably driven, is that in every such respect it is a lamentable failure—a monstrous mistake. What of moral tendency that might come of a treatise on the subject is lost in this, from its attempt at discussing in unscientific language, the physiological relations of the sexes; what of social

influence, is destroyed by the unnecessary detail of anatomical relations; and what of medical weight, fails from the incompleteness, which must of necessity characterize a book of such limits attempting to cope with such subjects. In its treatment of the physiology of the reproductive organs, it is very incomplete and incorrect, whilst the articles on "Syphalography" and gonorrhœa are neither scientific nor explicit. In fine the whole effect of the book is to appeal to the vulgar immoral senses, without the attraction of fine language or scientific diction.

Although the author claims, in concluding, that "it is submitted as the result of many years' study, reflection and observation, to an enlightened public, from the conviction that it is calculated to correct much error and to benefit succeeding generations," we cannot escape the inference drawn from the preface that a remunerative sale was the prime object of the effort. We do not believe that such a work can be consulted with advantage by our profession or by the community.

Every well-educated and well-disposed physician will have kind and judicious advice for all who may claim such aid; but assistanee in this can never be called from low-toned, unscientific works, it must come from the appropriation, by a pure and generous spirit, of all of christianity, morality, philosophy and physiology which is afforded by the highest authorities and most elaborate writings. And this advice cannot be done up in packages to suit all classes, like a quack remedy, but it must be adjusted and appropriated to the individual case, just as the well-armed practitioner combats the varied phenomena of physical disease.

Feeling as we do that neither the medical profession nor the community in general can possibly be benefitted by the circulation of this work, it is with great regret that we notice its issue by a house which has enjoyed so large a share of medical patronage, and we cannot but think that good judgment should prevent any respectable publishing firm from endorsing a book of such character. E. A. S.

Memoranda on Poisons, by Thomas Hawkes Tanner, M.D., F.L.S., etc., etc. From the last London edition. Pocket edition, pp. 112. Philadelphia: Lindsay & Blakiston, 1864. Price 75 cts.

This is a most valuable little work to the practitioner of medicine. It is not very often, it is true, that cases of poisoning occur, but when they do, it is of the last importance that the physician be ready for the emergency. According to our author "there seems reason to fear that the crime of slow poisoning is more extensively practiced in the present day than is generally believed." This, if true, is an additional reason why the practitioner should have something like this manual at hand.

The work consists of five parts.

1. The *Introduction* in four chapters on the Definition, Diagnosis, and Treatment of Poisoning, and the Classification of Poisons.
2. *Irritant Poisons* in fourteen chapters.
3. *Narcotic Poisons* in six chapters.
4. *Narcotico-Irritant Poisons* in five chapters.
5. An *Appendix* in three chapters, on the Bites of Venomous Reptiles, Bites of Rabid Animals, Stings of Bees, etc.

It is surprising how much valuable information has been condensed into this small pocket manual. Every physician should have a copy.

Lindsay & Blakiston's Visiting List.

This well-known pocket companion, which has become almost indispensable to many, is already on our table for 1865. Besides the Diary and Book of Engagements, it contains an Almanac, Marshall Hall's Ready Method in Asphyxia, Poisons and their Antidotes, Table for calculating the Period of Utero-Gestation, and blank leaves for the various memoranda, etc., needed by a physician in practice.

This edition is in some respects an improvement on former editions. In consequence of the increased cost of producing books, the price of the Visiting List, like that of every thing else, has considerably advanced.

Subscribers to the Reporter who pay a year's subscription in advance, receive it at a reduced cost, with their names stamped on it in gilt letters. See our list of commutations.

A Treatise on Gonorrhœa and Syphilis, by Silas Durkee, M.D., Consulting Surgeon to the Boston City Hospital; Fellow of the Massachusetts Medical Society; Member of the Boston Society for Medical Improvement; Honorary Member of the Medical Society of the State of New York; Fellow of the American Academy of Arts and Sciences, etc Second edition revised and enlarged, with eight colored illustrations. Philadelphia: Lindsay & Blakiston, 1864. Price $5.

The origin of the above work grew out of a premium essay on the "Constitutional treatment of Syphilis." After a somewhat careful perusal of the volume, which numbers 467 pages, we give it an unqualified approval. It is practical, concise, and keeps for the most part, out of the vortex of controversy. The numerous formulæ which are introduced, will prove acceptable to the general practitioner. In that portion of the work appropriated to Syphilis, the author, we are glad to see, does not commit himself to the new doctrines on the nature of chancre, but wisely proceeds on the supposition, that chancre is never to be regarded as harmless, and that its early destruction may preserve from constitutional involvement. The illustrations are neatly colored, and convey all, which such means are capable of doing, although we never entertained a very exalted opinion of this method of communicating instruction in skin affections. The publisher has done his part of the work well, and with the addition of this very agreeable feature; no part of the work has been appropriated to a long array of the publisher's works. This is worthy of imitation

MEDICAL AND SURGICAL REPORTER.

PHILADELPHIA, OCTOBER 8, 1864.

THE REPORTER IN NEW YORK.

Our readers have observed that we have engaged the services of a publisher in the city of New York. We have also employe da resident editor for that city, who will look after the medical interests of New York and vicinity, secure communications, reports, etc., etc.

E. D. Ledyard, Esq., will make a thorough canvass of New York city and vicinity, and we bespeak for him a favorable reception by the profession.

WINES, SEGARS, ET ID OMNE GENUS.

A statement is going the rounds of the newspapers that the consumption of wines has gone down nearly forty per cent. in this country, and the consumption of segars one-half. We presume that the influence that has brought about this, in our view, valuable result, is high taxation. For the good of the country we could heartily wish that the tariff on these articles were still further increased, and indeed rendered absolutely prohibitive. There is no appetite or habit that so demoralizes a man as the use of intoxicating drinks and tobacco. When a man becomes addicted to their use, he is in imminent danger of ultimate ruin. He degenerates in his tastes, feelings, conversation, manners, and in his choice of company. His tendency is downward in the social scale. He loses character, position, and the respect of the community. He exposes himself to diseases to which he should be a stranger. His time, as well as his health is consumed. More than all, these habits, and the influences which they bring a man in contact with endanger his everlasting welfare. These are some of the reasons why we rejoice at high tariffs or anything that will tend to diminish the consumption of these the most useless and the most dangerous of all luxuries.

It must not be understood that we suppose that the evils we have enumerated necessarily result alike to all who use the articles in question. It is their tendency to produce these evil results that leads us always and everywhere to discountenance their general use. Indeed, our indictment against them is but partially made out above. Among the rest we believe that our free government has no greater enemy than is found lurking beneath these foster parents of idleness and crime.

But our rejoicing at the alleged diminished consumption of wine and tobacco is dampened by the evidence constantly before our eyes, that the use of other kinds of intoxicating drinks seems to rather increase than diminish, and by the fact that increasing attention is being given to the production of domestic wines. To one who looks at the production of wine in this country in a mere business point of view as between importation and home-production, it may be all well enough to rejoice over our growing independence of foreign sources for this commodity. If this were all we would rejoice too; but it is not. It were bad enough to import from abroad these dehumanizing agents, these destroyers of the peace and happiness of our families, these evil genii of our ballot boxes, these moles under our political fabric, these promoters of sickness pauperism and crime. It were bad enough, we say, that we should receive from abroad these relics of barbarism and emmissaries of despotism, but to engraft them upon our own soil, is a worse error than the first. If we must have them let them come to us like other effete ideas from the Old World or their dependencies. We trust that our country has a nobler mission to accomplish in the world, than to sow a crop of dragon's teeth broadcast throughout the land.

Our profession, if they would not close their eyes to it, know the physical and moral evils connected with the use and abuse of these agents but too well, as they come in daily contact with their effects on individuals and families. We confidently appeal, therefore, to them, by precept and by example to do all in their power to discountenance their use.

THE MEDICAL SCHOOLS.

The prospects for large classes in the leading medical colleges throughout the country, are unusually good. Those in this city promise to be well attended, their lists of matriculants being far in advance of the same period last year. We should not be surprised if the classes in those schools which, in former years depended largely on the States now in rebellion, for patronage, were nearly, if not fully, as large as they ever were. In the meantime the faculties of the colleges have been improving their organization, infusing life, vigor, and animation, and adding to the means of demonstration and illustration of their courses of instruction.

The future of the medical profession in this country, is full of promise. The standard of instruction in the schools is being elevated, and there is evident an increasing intelligence in the classes.

Notes and Comments.

Army Medical Board.

An Army Medical Board, to consist of Surgeon CHARLES S. TRIPLER, U. S. A., President; Surgeon WILLIAM S. KING, U. S. A., and Surgeon GLOVER, U. S. A., Recorder, will meet at Cincinnati, Ohio, on the 18th inst., for the examination of candidates for admission into the Medical Staff of the United States Army, and of such assistant surgeons for promotion as may be brought before it. Applicants must be between twenty-one and thirty years of age, and physically sound. Applications must be addressed to the Secretary of War, or the Surgeon-General, stating the residence of the applicant, and the date and place of his birth; they must also be accompanied by respectable testimonials of moral character. No allowance is made for the expenses of persons undergoing the examination, as it is an indispensable prerequisite to appointment. There are now five vacancies on the Medical Staff.

Hospital Closed.

The Christian Street Hospital in this city, has been closed. The patients have been transferred to other hospitals in the Department. It was used for maimed soldiers. The Surgeon-in-charge, Dr. R. J. LEVIS, has been transferred to the hospital at Twenty-fourth and South Sts.

Gone to Europe.

Dr. C. A. POPE, of St. Louis, Missouri, has gone to Europe, and expects to be absent two or three years. Dr. POPE is one of the most prominent surgeons in the West, and an ex-president of the American Medical Association.

Vaccine Virus.

We are receiving orders for vaccine virus which we cannot fill until we hear from some whom we have supplied, and have received no response in kind. We hope our friends will be prompt in this matter, as there will be considerable demand now for supplies of virus, which we are anxious to fill promptly.

Visiting Lists.

☞ Those of our subscribers who desire to provide themselves with visiting lists in connection with the REPORTER at our commutation rates will please send in their orders early, so that we may have an idea how many copies we shall have to procure, and have time to stamp their names upon them. *See commutation list on second page of cover.*

Correspondence.

FOREIGN.

LETTERS FROM Dr. W. N. COTE.

PARIS, *August 12th*, 1864.

Inflammation of Varicose Veins in Lying-in Women.

The *Archives de Médicine* contains an article from M. NIVERT on the spontaneous inflammation of the varicose vein situated on the inferior members in women recently delivered. The facts exposed by M. NIVERT took place at the Maternité during the reign of two successive epidemics of puerperal fever, as every thing leads us to think that they have the same origin as the other puerperal accidents comprised under this denomination. In the first epidemic, most of the death cases were caused by uterine phlebitis complicated with purulent infection, whilst there were but few cases of peritonitis. The same was observed in the second epidemic with the exception, however, that peritonitis a short time before death, was oftener met with than uterine phlebitis. In a certain number of lying-in women the inflammation of the varicose veins followed the same course and terminated in the same manner as uterine phlebitis, diffused suppuration in the cavity of the vessel, pyæmia and death. The general symptoms were about the same in both cases, only once the suppurative phlebitis became encysted and the patient escaped general infection.

Santonine in Treatment of Uric Acid Deposits.

La Presse Medicale publishes several observations made by Dr. CAMERA, upon the action of santonine as a preventive remedy against concretions of uric acid in the urinary ducts. The result of these observations has convinced our experimentator that patients afflicted with uric gravel, and suffering now and then from violent nephritic pains, felt considerable relief after using santonine for some time. He administered it to his patients during a month, twice a week, at a dose of five or six grains, at morning before meal. The next day he would prescribe a purgative dose of castor oil. This remedy may be taken for several months without inconvenience. The patient tortured with nephritic colic owing to the presence of uric acid concretions in the urinary canals have, according to our author, been no more troubled with the severe pains which in many cases had well nigh put their lives in danger. They have

moreover perfectly supported the physiological effects of the medicine, a fact which deserves to be taken into consideration.

Researches respecting Ozone.

Dr. Pfaff, physician at Plauen, in Germany, busily occupies himself with making ozonometric observations, and respecting those of 1861, comes to the following conclusions:

1. In too large quantity in the air, ozone acts unfavorably on the diseases of the respiratory organs. Persons suffering from tuberculosis or chronic catarrh of the lungs would do well to provide themselves with an ozonometer, and remain indoors when the air contains much ozone.

2. The quantity of ozone has little or no influence on epidemical diseases, especially if they be not complicated with catarrh of the respiratory viæ.

3. A large proportion of ozone, favors not only through the northwest wind, but also through all winds, the development of inflammatory affections, especially that of tonsillary angina.

4. Ozone seems to exercise no influence whatever on the other diseases.

Rupture of the Bladder.

Dr. Fraenkel, of Neustadt, gives a case of rupture of the bladder. A vigorous, healthy, and middle-aged man got into a quarrel in a tavern, and was knocked down by his adversary, who throwing him on his back over the sill of a window, pressed heavily upon his abdomen with his knee. He succeeded in getting up, and complained of great pain in the lower part of the abdomen. He went out of the building, but could not walk, and had to be carried home. Soon the pain increased, the urine could not be voided, and he died the eighth day. The physician who had been attending on him had looked upon the ailment as a rheumatic inflammation of the abdomen, but the judicial post-mortem examination which took place three weeks after sepulture, revealed a rupture an inch long between the summit and the posterior wall of the bladder. This organ had collapsed, and there was found in the small basin quite a large collection of a brownish liquid. This fact, singular as it may appear, may be explained by the position of the unhappy man, thrown back on the window, the abdomen protruding in front and the bladder, no doubt, strongly distended, which circumstances joined to the compression exercised upon him by his adversary suffice to explain the rupture of the organ.

Epithelium in the Terminal Bronchial Vesiculæ.

You are aware that most of the histiologists more or less deny the existence of an epithelium in the terminal bronchial vesiculæ. It appears that Dr. Eberth, prosector at Würzburg is not of this opinion. He has made researches on the lungs of swine and calf, which he would cause to dry after insufflating them or harden in alcohol after injecting the vessels with paste and carmine. According to that anatomist the pulmonary vesicules have their walls and infundibulum covered with a delicate and interrupted epithelium, which surrounds especially the connecting parts of the vessels. The free and narrow sides of the alveolar walls only are deprived of epithelium.

Digitaline in Diseases of the Lungs.

The utility of digitaline in the treatment of affections of the lungs or the heart is well known. It produces relaxation of the pulse by slackening the circulation of the blood. Opinions differ as to the influence it may exert upon the urinary secretion. Dr. Stadion, of Kiero, publishes on this subject numerous observations and experiments he has made upon himself, the general result of which he gives under the form of propositions I will transcribe.

1. Digitaline produces in the physiological organism a *diminution* of the quantity of liquid secreted by the kidneys.

2. It brings on a *diminution* of the main constituting parts of urine, such as urea, chlorate of soda, phosphates and sulphates.

3. Uric acid alone is increased in quantity, but the degree of acidity of the urine remains the same.

4. The specific weight of the urine is decreased.

5. Digitaline at first increases the frequency of the pulse, then produces a diminution in the number of the contractions of the heart.

6. The rapid wasting and the slackening of nutrition which follow the administration of digitaline are two important facts which show us the action and the mode of administering this remedy.

7. Digitaline acts like digitalis upon the circulatory, nervous, and muscular systems, as well as upon the organs of generation.

8. It exercises an energetic influence upon the latter organs by depressing them, and it may momentarily arrest entirely the activity of the sexual system; it should therefore be placed foremost among the antaphrodisiacal agents.

9. Its action upon the intestinal tube and the digestive organs is weaker than that of digitalis.

10. A particular affection of the mucous lining of the nose declaring itself under the form of a violent coryza seems to constitute a characteristic symptom during the employment of digitaline.

11. The strength of the action of digitaline compared with that of the plant, may be in the relation of thirty to one.

12. The dose of the remedy should not usually be over a fifth of a grain per day. In most cases especially in chronic affections, a twentieth to a sixth of a grain per day is sufficient for producing sensible effects.

Neurosis of the Lachrymal Nerve.

La Revue de Thérapeutique Médico-Chirurgicale contains an observation of neurosis of the lachrymal nerve, with shedding of tears. Dr. TAVIGNOT says that this singular affection is frequently met with. It may exist alone, or, what is more frequent, together with several nervous affections of the fifth pair. It often shows itself and persists as a last symptom of a former hysteriform state. It is much oftener seen in women than in men. Dr. TAVIGNOT has hitherto met with nervous weeping but on one-side. It presents moreover several degrees of intensity. At times this affection is more or less under the control of atmospheric changes, diminishing or increasing, at certain seasons of the year. It may even momentarily cease, and then reappear with its former symptoms. As to its duration nothing can be determined beforehand. Dr. TAVIGNOT has seen it persist during whole years, but it is susceptible of curing certain cases, in a somewhat spontaneous manner, and under the only influence of modifications produced upon the constitution by age and an appropriate diet. This neurosis has often been confounded with a lachrymal tumor or other affections of the lachrymal ducts. The treatment should especially be a general one and the employment of ferruginous agents, associated with belladonna, hydrotherapia, sea-bathing, pure air, exercise, a proper regimen, constitute its basis, and may bring on, with time, a more or less complete cure of the disease.

Opening Abscesses of the Neck.

For opening the ganglionary abscesses of the neck in children, Dr. GUERSANT employs the filiform seton which usually leaves no trace whatever. For that he uses three or four silk threads which he passes through the abscess by means of a fine and flat needle, in the direction indicated for the incision, so that one of the punctures may be lower, and that the threads be in the direction of the folds of the skin, or according to the direction of the muscular fibres as, for instance, that of the sterno-mastoid. The pus being evacuated, the whole is covered with a plaster, taking care to move the thread every day. The seton is taken away when there is no more suppuration or collection of matter. So long as there is tumefaction, the presence of the seton hastens its melting,

W. N. CÔTE.

DOMESTIC.

ANÆSTHESIA.

Report of the Hon. HENRY WILSON, *Chairman of the Senate Committee on Military Affairs, submitted to the United States Senate at the Third Session of the Thirty-seventh Congress, Feb. 13th,* 1863.

EDITOR MED. AND SURG. REPORTER:—

This report purports to express the opinions of the entire Committee touching the origin of modern anæsthesia, but it is understood that the concurrence of the other members was yielded as a matter of complaisance to the solicitations of the honorable chairman. The report therefore must be deemed his offspring, but whether by conception or adoption, need not be made a subject of inquiry.

No doubt the honorable chairman is an able and a most faithful representative of *"the Boston notion"* that modern anæsthesia originated in the great commercial emporium of New England. Hence he was prepared to go the whole figure in favor of WM. T. G. MORTON as the author of this invaluable discovery, and if the reckless statements and sweeping assertions of this document can avail, he must undoubtedly be recognized as such and among the greatest of the benefactors of our race. But it so happens there are those—who have done what the honorable chairman has not even attempted,—who have carefully investigated this matter and looked into all the leading facts of the case, who have weighed, in even scales, the evidence adduced on the one side and on the other, and have maturely considered and intelligently applied the scientific elements and principles appertaining to the subject; and who have been constrained by a love of truth, rectitude, and fair dealing, to come to conclusions directly the reverse of those on which the honorable gentleman has so rashly precipitated himself.

his report consists of two parts: the report proper occupying only six pages and an appendix, or rather three appendices of one hundred and sixty pages, making a very considerable volume the printing of which must have cost the Government several hundred dollars. It was not submitted till the 13th of February, only eighteen days before the expiration of the Congress, and it is doubtful whether it could have been printed and laid on the table of members in advance of that event, but if otherwise, it is certain that such an extrinsic and complicated document could not have been read over, and much less thoroughly digested and understood amidst all the anxieties, perplexities, and confusion which uniformly attend the last few days of an out-going Congress. This, no doubt, the honorable chairman deemed quite immaterial, for, after holding up Wm. T. G. Morton as being beyond question, the alpha and omega, the beginning and the end of anæsthesia, as now understood and practiced throughout the civilized world, concludes as follows: "your committee" (in fact the honorable chairman) "are of the opinion that something is due" (meaning from the United States to the aforesaid Wm. T. G. Morton) "but they impart these facts for the information of the Senate without any recommendation." O! most lame and impotent conclusion! The honorable chairman has found out that there is due from the United States of America to the aforesaid Morton "*something*" whether due legally, equitably, or morally, he does not condescend to tell us, but we, as a nation, on some grounds owe "something," whether in *greenbacks* or in the *yellow dust* does not appear. All we learn is that "something" is in the abstract due, but Morton is after the *concrete*. He has had, for the last ten or fifteen years, and still has a shrewd eye for the contents of the United States Treasury.

The honorable chairman should have recollected that "hope deferred maketh the heart sick," but nevertheless allowance must be made in his favor. He was, no doubt, painfully impressed by the darkness that pervaded the Senate chamber on this subject, he concluded therefore to report certain facts "for the information of the Senate," to rush into the Senatorial arena in the hope of dissipating that darkness by the exhalation of certain facts having all the penetrating diffusive and effulgent power of a calcium light. Hence it becomes quite material to inquire what these facts are that are capable of producing such marvelous results. Some of the more prominent will be here adverted to and are as follows:

1. The honorable chairman opens his exposé with the following statement.

"That at the time of the alleged discovery in 1846" (meaning by Morton) "and for a long and indefinite period prior thereto, means had been sought *and sometimes with success*, to relieve and *even to destroy pain* in surgical operations." Ah! then somebody had embarked in this inquiry in advance of Morton and had succeeded not only in relieving but in actually destroying "pain in surgical operations." Who was that somebody? Could it have been any other than Horace Wells? and yet the honorable chairman does not even mention the name of the man to whom the late Col. Bissell accorded so much merit. Recollect that the honorable chairman had before him a question of originality. Hence the name of the individual who at or before the era of Morton's pretended discovery sought means "with success" * * * "to destroy pain in surgical operations" became highly important. Do, honorable sir! let us know who it was? Why any reticence on such a subject. When and where were the experiments tried? What were the means? How long used? In surgery or dentistry, or in both? Was Morton acquainted with the party and thoroughly posted as to all the facts? Did he stealthily seize hold of the discovery of another, and has he been seeking to appropriate it to his own use? All these were most material inquiries, and yet the honorable chairman has not a word to say on the subject. He could have obtained an abundance of light by paying a flying visit to Hartford and the Charter Oak. That however would not answer his purpose. But, perhaps, we ought to be satisfied with the modicum of truth contained in the report. Let it then be written down that at or before 1846 *somebody* (other than Wm. T. G. Morton) had "sought" * * * "with success" * * * "means" * * * "to destroy pain in surgical operations," and then an enlightened public judgment will be quite likely to supply the hiatus. The honorable chairman need not be surprised should the name of the estimable though truly unfortunate Horace Wells appear in that connection.

2. But the honorable chairman obviously thought it would hardly do to have Morton's case on such a footing; he therefore proceeds as follows:

"For this purpose opium, Indian hemp, mesmerism, nitrous oxyd gas, and alcohol, were used

and all in their turn abandoned, except that opium in many cases, and mesmerism in a few, still continued to be used with partial and imperfect success. But at that time (meaning in 1846) "there was not any safe and certain means of producing anæsthesia known to and used by the medical profession."

It will be observed that the honorable chairman does not say that no such means had at the date named been discovered, for that he had already conceded, but only that they were not "known and used by the medical" (meaning surgical) "profession." But this, if admitted, would by no means settle the competing claims of WELLS or MORTON in favor of the latter. What is meant by the suggestion that there was not, at the date named, any such means known to the profession? Generally? or not at all? In the latter sense the statement would be false, as it was, and had been for near two years, known at Hartford that such means do exist, and what is more, had during that very considerable period, been used day by day with safety and success. But it is due to candor and truth that I should admit, as I now do, that the fact had not become generally known to the profession at the date referred to. WELLS was doing all he could to make it known, and had effected all in that respect, which could have been reasonably expected considering the delicate state of his health and the difficulties which he had to encounter. But what if MORTON then undertook to intercept him and to palm himself off on the public (by substituting another agent known to produce analogous effects, on the human system for the one used by WELLS) as the original or true discoverer of anæsthesia? Can any success which may have attended his efforts either detract from the merits of WELLS or mitigate his own baseness. The honorable chairman will hardly succeed in advancing the pretensions of MORTON by the suggestion under consideration.

In the extract first quoted he admits that somebody had with some agent succeeded in producing anæsthesia, and in the last he enumerates the agents, and among them the nitrous oxyd gas, and in the same connection he tells us that they were all successively abandoned. It is obvious that the nitrous oxyd must have been the agent that had been used with success, for no one would think of attributing any real anæsthetic power to either of the other four agents named; so that we have in substance a statement that although the nitrous oxyd had been used with success, yet at the era of MORTON'S discovery it had been abandoned. It is a pity that the honorable chairman did not refer to some of the evidence on which he based such an allegation. The use of the nitrous oxyd abandoned by HORACE WELLS! when in less than one month before his death he was present and administered it successfully to HENRY A. GOODALE, January 1st, 1848 on the occasion of the amputation of his leg, as sworn to by a whole cloud of witnesses. No! HORACE WELLS never abandoned the use of the nitrous oxyd while living, and if such use was suspended for a considerable number of years in consequence of the deplorable event referred to, that establishes nothing to the prejudice of the WELLS claim. In a former communication I have stated the principles upon which every question as to the authorship of any discovery must turn—principles that are recognized by the whole scientific world. They need not be repeated here.

In this case (as I have already abundantly shown) HORACE WELLS was the very first (after Sir HUMPHREY DAVY) to conceive the idea of paralyzing the nerves of sensation by inhalation and the first to ascertain that it could be done perfectly and with entire safety, and the first to introduce it into practice. What if he did not select the best agent. What if another has been ascertained to be more convenient or even more effective; and what if in consequence the use of the agent first selected has been suspended or wholly abandoned? Does this deprive him of the honor of having inaugurated the whole movement. The use of an agent may for a time be abandoned through misconception, and then such use may be revived with much more than its original éclat, and this is exactly what has happened in respect to the nitrous oxyd. Little did the honorable chairman anticipate when he wrote down that word "abandoned" that the use of the nitrous oxyd would be revived in less than six months thereafter, and would spread with unexampled rapidity all over the United States, vindicating everywhere the character of HORACE WELLS for truth, honor, and rectitude, and establishing on a basis which no power can subvert, his pretensions to be regarded as the true author of modern anæsthesia.

A LOVER OF TRUTH AND JUSTICE.

Small-pox in London.

In 1863 no less than 1537 patients (fifteen of whom were not suffering from smallpox) were admitted into the Smallpox Hospital in London. The deaths amounted to 274, or seventeen per cent. of the whole admissions. Of the whole number, 247 were unvaccinated, and 1273—no less than eighty-three per cent. of the admissions—vaccinated. The deaths amongst the unvaccinated averaged forty-seven per cent.; amongst the vaccinated 9.9 per cent.

News and Miscellany.

The Metals of the Future.

[Continued from page 131.]

The first of these metals to be brought into commerce was aluminium. Proved to exist by Davy in 1808, but first actually obtained by Wohler, in 1827, down to 1851, aluminium had been obtained only in exceedingly minute quantity, and only in the form of a "grey powder." The first compact piece, weighing more than a few grains, ever produced, was exhibited in the French Department of the Hyde Park International Exhibition. By 1854 Sainte-claire Deville had shown how it could be produced in almost any quantity, and soon the production of aluminium, which had hitherto been confined to the laboratories of the most expert of the brotherhood of chemists, began to take rank among the industrial arts. At the end of 1854 the selling price of aluminium was still at the rate of £55 per pound, but in 1858 the price was reduced to £5 per pound. In 1860 the manufacture of this metal, under Deville's patents, was undertaken in this country by Messrs. Bell Bros., of Newcastle-on-Tyne, who now produce it in considerable quantity, and are at present selling it at about £3 per pound. As yet, it has been applied to scarcely any but ornamental purposes, and to these chiefly in its alloys with copper, known as "Aluminium Bronze."

Of these alloys of aluminium and copper there are three in use, containing, respectively, 5, 7-5, and 10 per cent. of aluminium, and selling at 4-6, 5-6, and 6-6 per pound. These alloys "so like gold as scarcely to be distinguishable therefrom, with the additional valuable property of being as hard as iron," and they are being very largely used, instead of gold, for watch-chains, watch-cases, pencil-cases, and trinkets generally, and also for articles of ornament for the table. Aluminium by itself, has as yet, been used only in the construction of mathematical instruments, and as material for the delicate weights of chemists' balances, and also for statuettes and other small works of art produced by casting. Except for its dull color and inferior lustre—which, however, are probably due in part to impurities contained in the metal as at present produced, so that we may expect that a metal much richer in color and lustre will be obtained when the metallurgy of aluminium shall have arrived at greater perfection—aluminium would be especially suited for applications of the latter kind, since "it requires a much less intense heat than silver for melting, and when melted solidifies much more slowly, and is therefore particularly well adapted for castings that require to be executed with great delicacy."

Considering how short a time has elapsed since the art of eliminating aluminium from its compounds had its birth, the present selling price of the metal is marvelously low; but at the same time it no doubt greatly restricts the use of the metal. While its present price continues aluminium will probably be confined to such applications as those mentioned above; but at the reduced cost which is sure to be the result of improved processes of production the area of its applications will doubtless be very widely extended. Its lightness (its specific gravity being only 2.56 or about one-fourth of that of silver and about one-third of that of iron); its greater freedom, as compared with the commoner metals, from liability to discolor or oxidise by exposure to the atmosphere; its sonorousness, "greatly exceeding that of silver as regards clearness;" its nonliability to be acted upon by any of the elements of ordinary foods, and the non-poisonous nature of salts—negative qualities eminently fitting it for use as a material for vessels and utensils to be used for culinary purposes; and finally, the great tenacity* and malleability of many of its alloys and the exceeding hardness of others—these are properties which are certain to secure for aluminium, whenever its price shall permit, applications quite as numerous and as extensive as those of any metal at present in ordinary use.

Another of these metals, magnesium, the base of the earth magnesia, is now being "brought from the laboratory into the workshop of the artisan." Three years ago all the chemists who had ever obtained magnesium at all had probably not obtained an ounce among them, and only one year ago the selling price of the metal was still at the rate of 112 guineas per pound. Prof. Roscoe, however, on Friday week, exhibited some pounds of magnesium (of very much purer quality than had ever been seen while the metal was produced only by the grain) which he had himself seen produced the day but one before, during a half hour's visit to the magnesium works which Mr. Sonstadt has recently established at Salford; and one of the five cardinal facts is the history of magnesium, which, the better to impress them on the minds of his audience, he had caused to be stated on a painted placard hung above the platform, is that Mr. Sonstadt is now selling magnesium wire at three pence a foot.

Magnesium is a lighter metal than aluminium, its specific gravity being about 1.74. It is thus rather more than six times—whereas aluminium is only four times—lighter than silver. Its color and lustre are to those of aluminium as those of silver to those of zinc; indeed, if either of the two metals, magnesium and silver, has any superiority over the other as regards beauty and richness of color and appearance, the advantage is probably on the side of magnesia. In one important particular, magnesium has certainly the advantage of silver; while it does not oxidise, in a moderately dry atmosphere any more readily than silver does, it is entirely unaffected by sulphuretted hydrogen, by which silver is so speedily tarnished.

* The tenacity of a wire of aluminium bronze containing 10 per cent of aluminium is greater than that of a wire of the best iron, of the same thickness, in the proportion of 155 to 100.

Though magnesium does not exist quite so abundantly, perhaps, as either calcium or aluminium, there is very much more of it in the world than of any of the commonly used metals, not even excepting iron. Beside entering into the composition of an immense number and variety of less abundant minerals, it constitutes 13 or 14 per cent. of dolomite, or magnesian limestone, a rock which is found in almost all parts of the world in enormous quantity. In England, for example, "the magnesian limestone formation extends from Tynemouth to Nottingham, a distance of 147 miles," and over, at least, part of that long line is 600 feet thick. Magnesian limestone consists partly of carbonate of magnesium and partly of carbonate of calcium; but carbonate of magnesium by itself, exists in immense masses in some parts of the world as, for instance, in Greece and in India. In the ocean, moreover, magnesium exists in such quantity that where salt is obtained by evaporating down sea-water the "mother liquors" left after the separation of the salt might be used as perhaps the most economical ore of magnesium. Mr. SONSTADT has calculated that the ocean contains *one hundred and sixty thousand cubic miles* of magnesium—a quantity which would form a cubical mountain measuring fifty-four miles every way, and would cover the entire surface of the globe, both sea and land, to a thickness of more than eight feet.

What are the uses of the metal of which the world thus contains such a marvelous store, and the obtainment of which in any quantity—in such quantity, for example, as that in which we obtain iron—is now, thanks to the genius of Mr. SONSTADT, simply a question of working on a sufficiently large scale? Considering that it is little more than a year since the metal was first produced by the ounce, it is not wonderful that we can as yet answer this question only imperfectly—that with respect to the properties of the new metal very little is at present known. No metal, except gold, is better adapted for purposes of ornament; it is believed to be specially suited for telegraphic purposes; and, struck by the fact that it is but little heavier than heart-of-oak, while in certain conditions as to purity, &c., it is believed to be as strong and tenacious as steel, some one has suggested that, when it shall be cheap enough, we shall build our ships-of-war of it; but the only application of it which has as yet actually been made, is one dependent on the extreme richness in actinic rays of the light given forth by the flame with which it burns in atmospheric air.

The light is richer in actinic power than any other artificial light known—is so rich, indeed, in chemical rays, that the sun itself, when unobscured by a fog, or cloud, exceeds only by thirty-four times the chemical power of a magnesium flame having the same apparent diameter as that which the sun presents. The result is, that by the light produced by the combustion of magnesium wire, such as is now being sold at three, pence a foot, we are able to obtain in any weather, and at any hour of the day or night, much better photographs than can ever be obtained in this country by sunlight, except on such clear and sunny days as occur in this climate but very rarely indeed. Magnesium will thus render us henceforth independent of the sun for photographic purposes, and will, moreover, enable us to obtain photographic pictures of places—such as the interior of caves and mines, the passages in the interior of the Egyptian pyramids, and the like—into which sunlight never enters, nor can enter.

But it is not in actinic power alone that the magnesium light exceeds all other artifical lights yet produced. For the purposes of artificial illumination generally it is without a rival. A very thin magnesium wire will give off in burning as much light as a very powerful electric lamp; but the magnesium light, unlike the electric light, is soft and diffusive, and does not in the least dazzle or pain the eyes. It is, moreover of the purest white, so that all colors, even to the most delicate tints, are seen in it as perfectly as in sunlight, while a magnesium lamp has over both the electric lamp and the ordinary gas-light the advantage that it can be carried about as readily as a candle. A still greater advantage—one, indeed, of immense importance—which the magnesium light has alike over gas and over any kind either of oil-lamps or of candles, consists in the circumstance that magnesium, in undergoing combustion, gives off no deleterious vapors, nor indeed any vapors of any kind. Instead of its burning as gas, candles, and oil do, into aqueous vapor and carbonic acid, with a greater or less admixture of sulphuretted hydrogen, and other furniture-destroying, plate-tarnishing, and health-injuring compounds, the only product of the combustion of magnesium is a harmless *solid*, the oxide of magnesium or magnesia. All this points to the magnesium light being likely to come extensively into domestic use, while its great brilliancy would seem to render it eminently adapted for use in light-houses. In all probability its price will not long be an obstacle to either of these two applications of it; for even now, while the manufacture of magnesium is not yet three months old, the light from magnesium is but little more costly, quantity for quantity, than that from "composite" candles, seeing that two and a half ounces of magnesium will give forth, during combustion, as much light as *twenty pounds* of the best stearin.

Such is a rapid outline of what has as yet been done toward bringing into common use two of the three most abundant metals in nature—metals which will probably one day exceed all others in the variety and importance of their applications. With calcium, the other of the three metals in question, we are almost unacquainted in the metallic form. Combined with oxygen and carbon, it exists in nature certainly in greater quantity than magnesium, and probably in greater quantity than aluminium; but it has never yet been liminated by more than a few grains at a time. The largest pieces of it ever

seen are some recently obtained by Mr. SONSTADT, none of them weighing more than 20 grains, and it has probably never been seen pure at all. Much the same might be said of both barium and strontium which two metals, although they cannot be compared for abundance with either calcium, aluminium, or magnesium, yet exist in quite as great quantity as some of the metals now in common use, and in quite quantity enough to permit of their being of much importance in the arts in future.

The extraction of these "metals of the earth" from the compounds of them with oxygen and other bodies which exist everywhere in such vast profusion, is the object of a new branch of the art of metallurgy, which may be said to have had its origin entirely within the last decade, and which promises to rapidly attain immense proportions. Of the principles and processes which distinguish this new branch (which has very little in common with the other branches) of the metallurgic art, and of what has yet to be done in order still further to cheapen the metals to which it is applied, we may probably speak in another article.

Army and Navy News.

ARMY.

ASSIGNMENTS.—Ass't Surgeon Wm. Carroll, U. S. V., to Philadelphia, for medical treatment.

Surgeon Henry Janes, U. S. V., relieved from duty in the Department of Washington, and ordered to duty in charge of General Hospital, Montpelier, Vt.

Ass't Surgeon H. M. Sprague, U. S. A., relieved from duty in charge of U. S. General Hospital, at Newark, New Jersey, and ordered to duty as a member of the Army Medical Examining Board in New York City, in place of Ass't Surgeon Joseph C. Bailey, U. S. A., relieved.

Ass't Surgeon J. T. Calhoun, U. S. A., relieved from duty in the Army of the Potomac, and ordered to duty in the Department of the East.

Surgeon J. Y. Cantwell, U. S. V., relieved from duty in the Department of Washington, and ordered to report to the Provost-Marshal-General for duty.

Ass't Surgeon J. McCurdy, U. S. V., to report to the Medical Director, Department of the Cumberland, on the 15th of October, 1864.

Surgeon George G. Shumard, U. S. V., relieved from duty in the Army of the Ohio, and ordered to report for duty as Medical Director, Salt Lake, Utah Territory.

Ass't Surgeon B. S. Hovey, U. S. V., to duty at Louisville, Kentucky.

APPOINTMENTS.—Surgeon Daniel Stahl, 7th Illinois cavalry, Act'g Ass't Surgeons W. M. Dorran and S. S. Jessup, to be Assistant Surgeons of Volunteers.

MISCELLANEOUS.—The Surgeons and Assistant Surgeons, who were recently unconditionally exchanged, have been ordered to rejoin their regiments after having a leave of absence for twenty days.

A Board of officers, to consist of Lieutenant-Colonel D. C. Poole, Veteran Reserve Corps, Ass't Surgeon George A. Mursic, U S. V., are ordered to assemble at Camp Stoneman, District of Columbia, for the examination of enlisted men at that camp with a view to their transfer to the Veteran Reserve Corps.

NAVY.

Regular Naval Service

ORDERED.—Surgeon Wm. E. Taylor, to temporary duty as a member of the Board to examine candidates for admission to the Naval Academy as Midshipmen, and upon its conclusion to return to Boston, and resume his duties.

Ass't Surgeon E. M. Stein, to the *Savannah*, during the absence of Surgeon James Laws.

Surgeon Samuel Jackson, to duty as a Senior member of a Board of Medical officers to examine candidates for admission to the Naval Academy.

Ass't Surgeon L. J. Draper, to the *Princeton*.

DETACHED.—Ass't Surgeon Frederick M. Dearborne, from the *Tallapoosa* and ordered to the *Ohio*.

Ass't Surgeon D. V. Whitney, from the *Princeton*, and ordered to the *Lehigh*.

Ass't Surgeon Wm. T. Plant, from the *Lehigh*, and ordered North.

APPOINTED.—Frederick M. Dearborne to the grade of Ass't Surgeon.

Volunteer Naval Service.

ORDERED.—Act'g Ass't Surgeon J. E. Warner, to the *Tallapoosa*.

RESIGNED.—Act'g Ass't Surgeon J. L. Vaill of the *Champion*, Mississippi Squadron.

ORDER REVOKED.—Act'g Ass't Surgeon J. E. Warner, to the *Connecticut*, and waiting orders.

MISCELLANEOUS.—Left the Sloop of War *St. Louis* at Lisbon March 27th, Surgeon F. B. A. Lewis, for the United States, on leave of absence.

ANSWERS TO CORRESPONDENTS.

☞ Correspondents will please bear in mind that it is just now exceedingly difficult to get some kinds of work done, and much delay is sometimes caused thereby in filling orders. *Everything is at maximum prices.* Many books are out of print, and publishers are not issuing many new works or editions. Foreign books had better not be ordered.

J. F. Briggs, Hobbie, Pa.—What to observe at Bed-side and after death, mailed you this day.

Rowan Clarke, Antistown, Pa.—Aconitia mailed you this day.

H. Mesker, Jr., Hampton N. Y.—Bennett on Pulmonary Tuberculosis, mailed you this day.

E. Lewis, Jackson, Mich.—Ellis 'Formulary, mailed you this day.

I. S. Steele, Ind.—What to observe at Bed-side and after Death, mailed you this day.

A. G. Walter, Pa.—Agnew's Practical Anatomy, mailed you this day.

J. B. Williams, Pa.—Slade on Diphtheria, mailed you this day.

N. G. Blaylock, Ill.—Taylor's Medical Jurisprudence, and Wilson on Skin and Hair, mailed you this day.

D. Flanders, Maine.—Da Costa's Medical Diagnosis, mailed you this day.

J. E. McGirr, Penn.—Althaus' Medical Electricity mailed you this day.

R. S. Brice, Ind.—Smith on Parturition mailed you this day.

W. M. Newell, Ill.—Barclay's Medical Diagnosis, mailed you this day.

MARRIED.

ANDERTON—HOWARD.—On the 16th of September, in this city, by the Rev. Mr. Bringhurst, Dr. T. A. Anderton and Anna A., daughter of J. G. Howard, D. D.

HARTT—HARTT.—On Thursday, September 22d, at St. John, New Brunswick, by the Rev. S. Robinson, H. Le Baron Hartt, M. D., of New York, and Jennie M., eldest daughter of J. W. Hartt, of the former place.

LOWE—PATTEE.—On September 11th, in Mercer, Maine, by S. B. Walton, Esq., Ivory Lowe, M. D., of Canaan, and Philena K. Pattee, of Smithfield.

DIED.

HUHN.—On the 2d instant, George Huhn, M. D., A. A. Surgeon Camp William Penn, in the 55th year of his age.

METEOROLOGY.

Sept.	26,	27,	28,	29,	30,	O. 1,	2
Wind.....	W.	S. W.	S. W.	W.	W.	N. E.	E.
Weather ...	Clear.	Clear.	Cl'dy. Sh'er.	Cl'dy. Sh'er.	Cl'dy. Sh'er.	Cl'dy.	Cl'dy.
Depth Rain...			3-10		2-10		6-10
Thermometer							
Minimum.....	45°	48°	56°	62°	62°	48°	48°
At 8 A. M.....	54	62	64	69	60	51	59
At 12 M.....	64	72	74	77	65	56	63
At 3 P. M.....	69	75	74	77	62	57	62
Mean.....	58	64.1	67	71.1	62.1	53	58
Barometer.							
At 12 M.....	30.1	30.1	30.1	30.2	30.1	30.2	30 1

Germantown, Pa. B. J. LEDDON.